CLAIMS:

1. Method of welding workpieces (3, 5), particularly coated workpieces, by which, by means of a device (1), at least at the welding point, alternately a zero gap and an outgassing gap (S_A) adjustable in its height for the escape of the gases and vapors occurring during the welding operation are generated, for this purpose at least a first workpiece (3) being moved relative to a second workpiece (5), characterized in that the relative movement between the workpieces (3, 5) is force-controlled and/or path-controlled.

2. Method according to Claim 1,
characterized in that, for generating an outgassing gap (S_A) between the workpieces (3, 5) to be welded, of which preferably at least one is a sheet metal part, the workpieces (3, 5) are placed upon one another at the welding point in a force-free manner, the height of the gap (S_0) being - preferably exclusively - determined by material-caused and/or manufacturing-caused inaccuracies of the workpieces (3, 5).

3. Method according to Claim 1 or 2,
characterized in that the outgassing gap (S_A) has a height which is in the range of from 0.1 mm to 1 mm and preferably amounts to approximately 0.1 mm to 0.3 mm.

4. Method according to one of Claims 1 to 3,
characterized in that, for generating the technical zero gap between the workpieces

(3, 5) at the welding point at least one of the workpieces (3) is pressed by means of at least a first contact pressure element (9; 9A) with a defined adjustable contact pressure force (F_target) against the other workpiece (5).

5. Method according to Claim 4,
characterized in that the first contact pressure element (9) is displaced back by a defined adjustable path (path Δz) after the technical zero gap was generated between the workpieces (3, 5) and maintained for a definable time period, and in that, in the process,the outgassing gap (S_A) between the workpieces (3, 5) is generated - preferably exclusively on the basis of the material-caused restoring forces of the at least one workpiece (3) interacting with the contact pressure element (9).

6. Method according to Claim 4,
characterized in that, after the technical zero gap has been generated between the workpieces (3, 5) and was maintained for a definable time period, the contact pressure force (F_target) is reduced to a definable value, so that the outgassing gap (S_A) is generated between the workpieces (3, 5) - preferably exclusively on the basis of the material-caused restoring forces of the at least one workpiece (3) interacting with the contact pressure element (9).

7. Method according to Claim 5 or 6,
characterized in that, after a definable time period, a technical zero gap is formed

again between the workpieces (3, 5) in that the first contact pressure element (9; 9A) presses the one workpiece (3) with a defined adjustable contact pressure force (F_target) against the other workpiece (5).

8. Method according to one of Claims 1 to 4,
characterized in that, after the technical zero gap was generated between the workpieces (3, 5) and was maintained for a definable time period, the first contact pressure element (9A) is displaced back so far that a second contact pressure element (9B) - viewed in the direction of the contact pressure force (F_target) - is arranged in front of the first contact pressure element (9A) and at a definable distance with respect to the zero gap, onto which the workpiece (3) places itself or is placed which previously was interacting with the first contact pressure element (9a), while forming the outgassing gap (S_A).

9. Method according to Claim 8,
characterized in that after a definable time period, a technical zero gap is formed again between the workpieces (3, 5) in that the first contact pressure element (9A) - viewed in the direction of the contact pressure force (F_target) - is moved by a distance (Δz) corresponding to the height of the desired outgassing gap (S_A) in front of the second contact pressure element (9B), and then both contact pressure elements (9A, 9B), while maintaining their distance (Δz) from one another, are moved so far in the direction of the workpieces (3, 5) that the first contact pressure element (9A) presses the one workpiece (3) with a defined adjustable contact

pressure force (F_target) against the other workpiece (5).

10. Method according to one of Claims 1 to 9,
characterized in that a zero gap and an outgassing gap (S_A) between the workpieces (3, 5) are formed at least once during the welding process.

11. Method according to one of Claims 1 to 10,
characterized in that the workpieces (3, 5) to be welded are welded to one another by means of a high-energy, preferably continuous irradiation.

12. Device for implementing the method according to one of Claims 1 to 11, having at least one oscillatingly displaceable contact pressure element (9; 9A, 9b) interacting with at least one of the workpieces (3, 5) to be welded together, for generating a zero gap between the workpieces (3, 5),
characterized by a control unit for the force-controlled and/or path-controlled adjustment of the oscillation movement of the contact pressure element (9; 9A, 9B) during the welding process.

13. Device according to Claim 12,
characterized in that the control unit has at least one sensor for determining the contact pressure force of the contract pressure element (9) onto the workpiece (3) and/or the displacement path of the contact pressure element (9).

14. Device according to Claim 12 or 13,

characterized by at least two mechanically mutually coupled contact pressure elements (9A, 9B).

15. Device according to one of Claims 12 to 14,

characterized in that the contact pressure element (9; 9A, 9B) can be force-lockingly or form-lockingly coupled with at least one of the workpieces.